



Resurgence and the Biotech Industry

William J. Kridel Jr., Founder and Managing Director
Ferghana Partners Group

Since the 4Q08 Collapse, the Biotech Industry has Revived in 2009

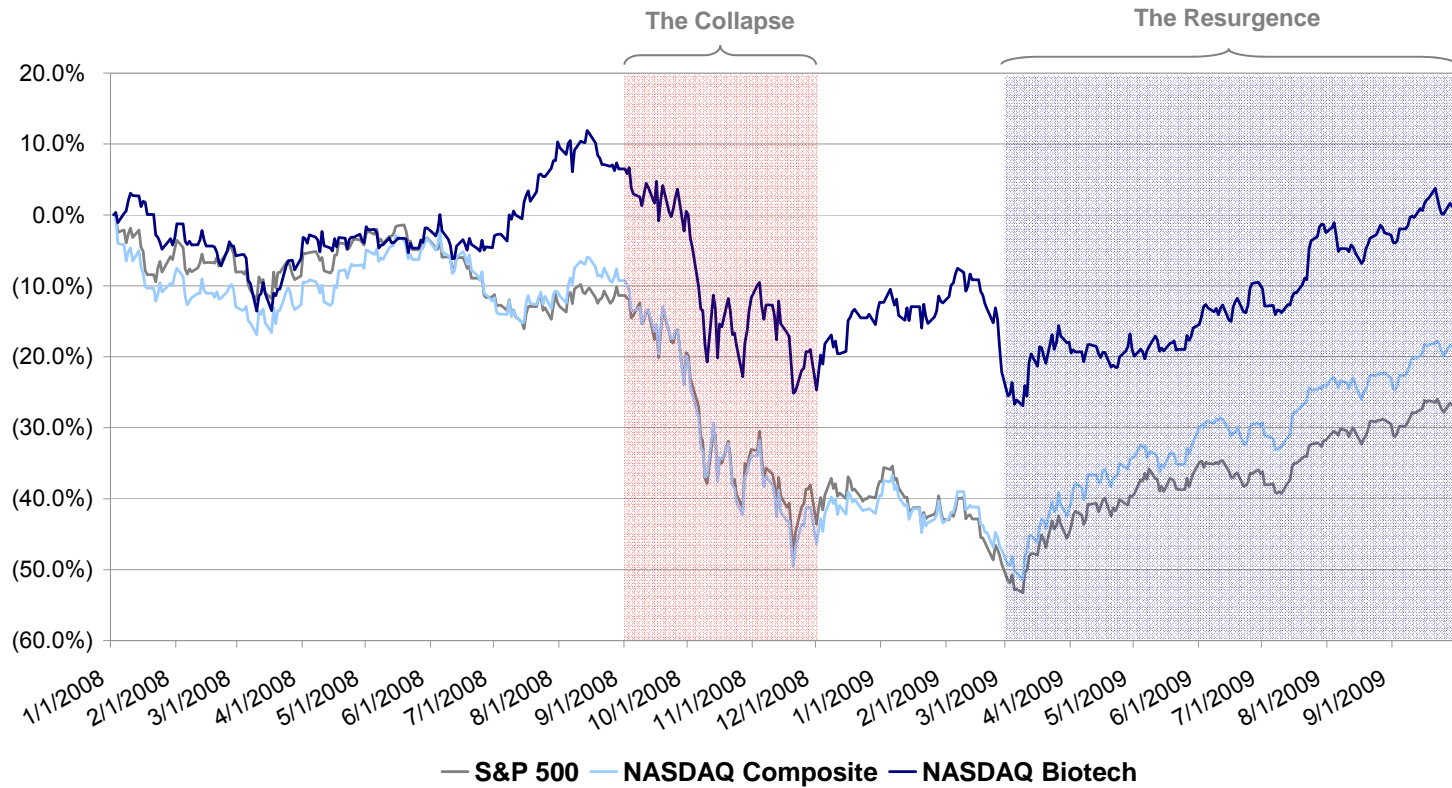
Despite the economic crisis, stock markets have regained ground and have steadily been on the resurgence since April of 2009

The NASDAQ Biotech index has outperformed the general market across the January 2008 – September 2009 time frame

The collapse had less impact on biotech than on general markets

Markets have experienced a resurgence since March of 2009

Market Performance from January 1, 2008 – September 30, 2009



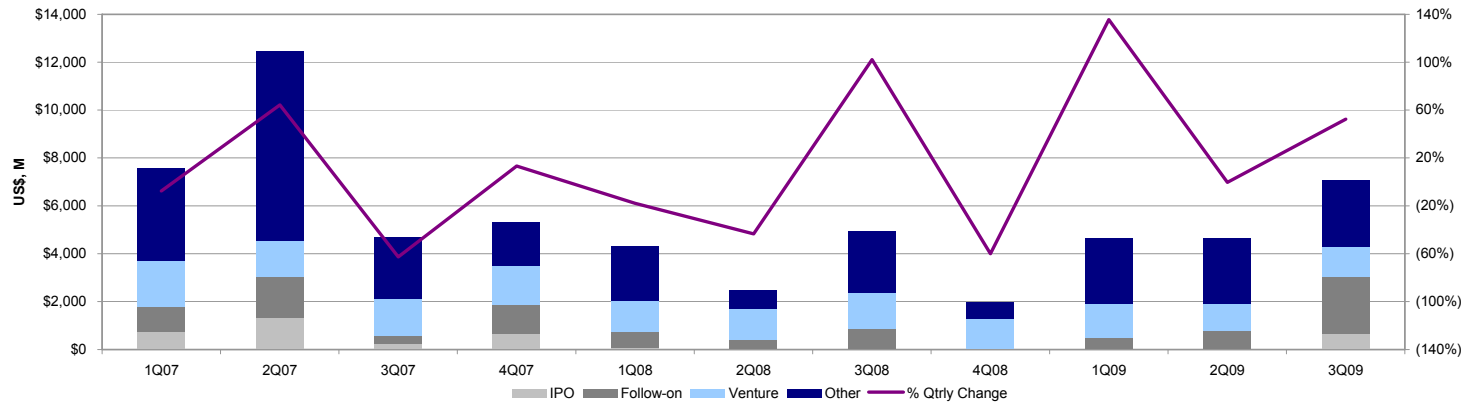
Source: Thomson Financial

Financing Has Returned, The Drought Seems to Be Over...For Now

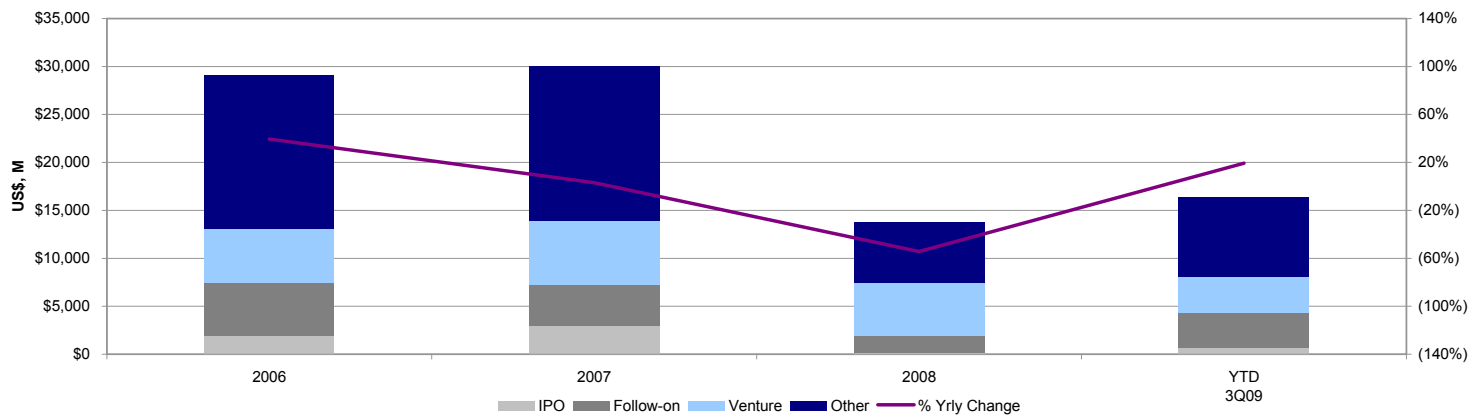
The IPO window has finally cracked open a bit after being shut for over a year

Financing for the three quarters ended 3Q09 has already exceeded the amount of financing raised in the entire 2008... but IPOs are still scarce

Quarterly Financing Trends: 1Q07 – 3Q09



Yearly Financing Trends: 2006 – YTD 3Q09



Source: BioCentury Online Intelligence

Venture Capital Overview

VC Activity Across All Industry Sectors

- Across all sectors, VC's invested \$4.8B in 637 deals in 3Q09
 - Quarterly investment activity increased 17% in terms of dollars but fell 3% in number of deals compared to 2Q09
 - The increase in dollars invested was driven by several large rounds in the Clean Technology sector, which has been heavily subsidized by the government
- Annual investments for 2009 are expected to exceed \$15B
- There is a gradual and deliberate industry shift towards a longer term VC investment strategy
 - VC's increasingly focused on industry sectors that require multiple rounds of financing for an extended time horizon

Healthcare VC Activity

- Thru 3Q09, the healthcare sector raised \$3.8B in venture capital
- In 3Q09 the healthcare sector raised \$1.5B in venture capital
 - Biotech: \$905M in 104 deals
 - Medtech: \$617M in 71 deals
 - Services: \$10M in 7 deals

IPO and Follow-On Market Overview

IPO Sector Snapshot

- Overall, in 3Q09, there have been 15 IPO offerings across all industries, the most since 4Q07
- Healthcare IPO activity is growing a bit but recent post-IPO performance is not great
- 3 healthcare services and 2 biotech IPOs have been priced in 2009 raising almost \$2B
- Financial sponsors (PE and VC) have been a primary driver of this recent spate of IPOs

Follow-On Sector Snapshot

- Follow-on activity has led the resurgence in healthcare financing
- 45 follow-ons priced in healthcare thru 3Q09, raising \$6.9B in capital
 - 33 in Biopharma, raising \$3.1B
 - 6 in Medtech, raising \$1.1B
 - 6 in Services, raising \$2.7B
- 29 follow-ons priced in healthcare in 3Q09, raising \$3.6B in capital
 - 22 in Biopharma, raising \$1.8B
 - 4 in Medtech, raising \$1.0B
 - 3 in Services, raising \$0.8B

Equity Distribution Programs

What are Equity Distribution Programs (EDP)?

- EDP's are an agreement between an issuer and an agent, whereby an agreed upon amount of capital can be raised via multiple draw downs "at the market" or at an agreed discount to market over a specified period of time
- The stock is offered pursuant to an effective shelf registration statement
- The draw down period is initiated at the issuers request and typically lasts 5-20 days. It is common to have a minimum threshold price below which the agent will not sell stock

EDP Snapshot

- EDP's are increasing in popularity with 90 programs across all industries announced in 2009, vs 108 programs the preceding four year period
- 9 healthcare EDPs have been announced in 2009, accounting for over \$200M

PIPE and Registered Direct Financings Overview

PIPE (Private Investment in a Public Entity)

- Across all industries, 149 PIPEs have been completed in 2009 raising over \$16.6B
 - 41 PIPEs were completed for \$2B in 3Q09, down 28% versus 3Q08 PIPE issuance
- 27% had warrant coverage
- 40 healthcare PIPEs have been completed in 2009
 - 31 common stock PIPEs, raising \$625M
 - 9 convertible PIPEs, raising \$265M

Registered Direct (RD)

- Across all industries, 90 RDs have been completed in 2009 raising over \$2B
- 53% had warrant coverage
- 52 healthcare RDs have been completed in 2009, by far the most active industry sector to employ this instrument
 - 50 common stock RDs, raising \$1.3B
 - 2 convertible RDs, raising \$55M

Alternative Sources of Financing [1/2]

Source	Description
Government Grants	<ul style="list-style-type: none"> ▪ Texas Life Science Foundation, CIRM and other state sponsored programs ▪ Small Business Innovation Research Grant ▪ National Institutes of Health ▪ Department of Defense ▪ NYC grants / equity ▪ FDA
Foundation Grants	<ul style="list-style-type: none"> ▪ The Bill and Melinda Gates Foundation ▪ Michael J Fox Foundation ▪ Rockefeller Foundation ▪ Ford Foundation ▪ MacArthur Foundation ▪ Packard Foundation ▪ Howard Hughes Medical Institute

Alternative Sources of Financing [2/2]

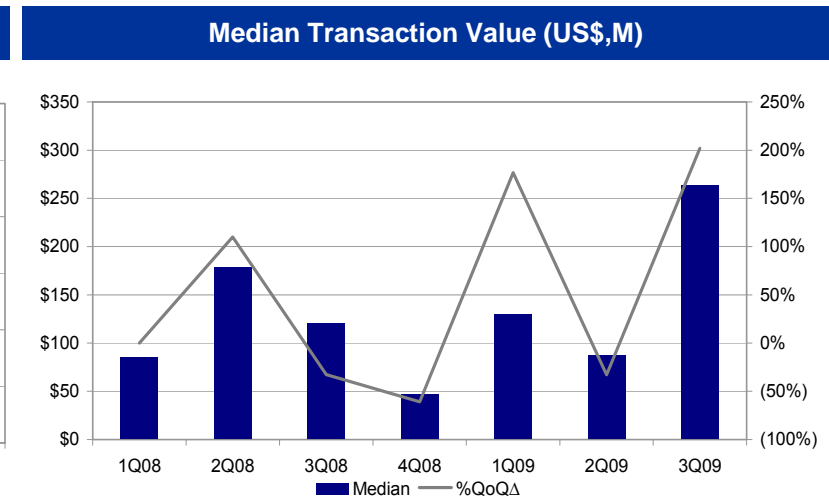
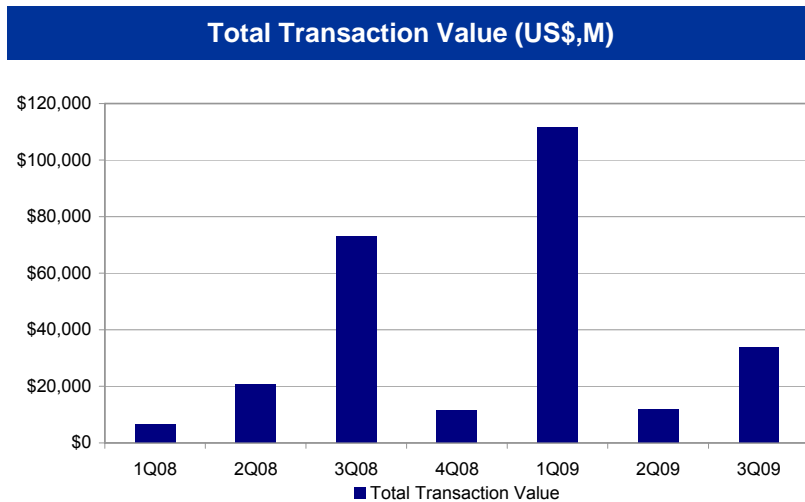
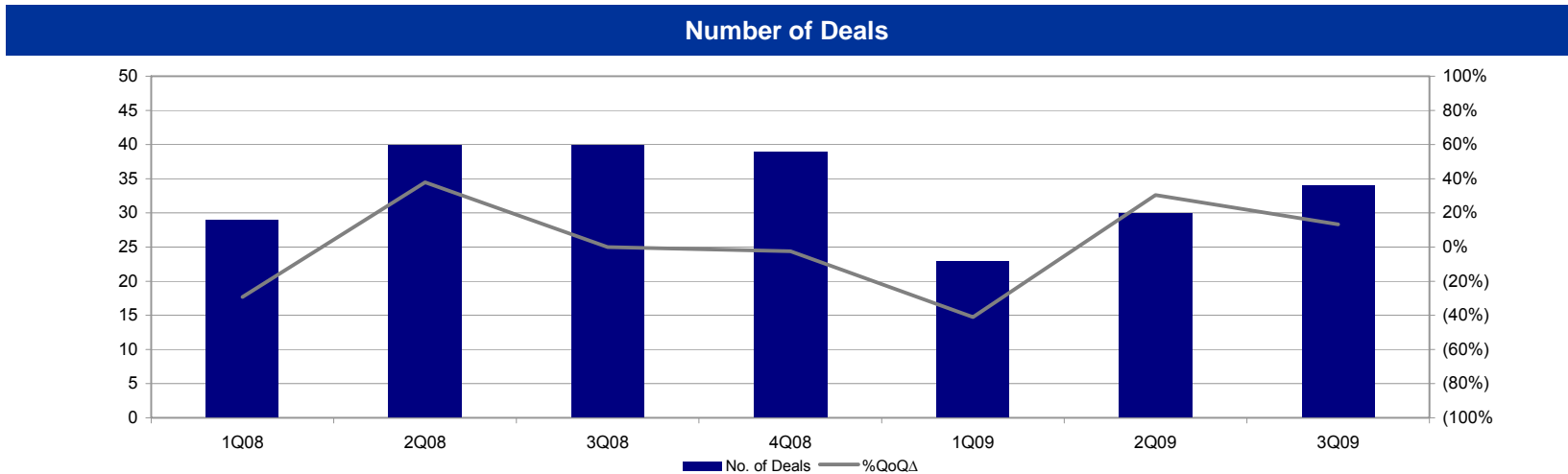
Source	Description
Collaborative Development Programs	<ul style="list-style-type: none"> ▪ Specialist funds (e.g. Symphony Capital, Care Capital or Celtic Pharma) creates an entity to license and fund clinical development of product candidates from a company's pipeline ▪ The investee company retains the rights to take back the products after clinical trial results
Committed Equity Financing Facilities	<ul style="list-style-type: none"> ▪ Purchaser agrees to acquire a fixed amount of stock or a fixed \$-value at a negotiated or specified below-market price over a specified period ▪ The timing of sales are made at the issuing company's discretion
Royalty Financing	<ul style="list-style-type: none"> ▪ Royalty streams on marketed or soon-to-be marketed products are bought out by specialized firms such as Paul Capital, Royalty Pharma, and DRI Capital

The M&A Landscape: January 2008 – 3Q09

M&A deals dipped in 1Q09 (perhaps due to mega-mergers) but has increased in recent months

Notable mega-mergers in 1Q09 (Pfizer / Wyeth and Merck / Schering) were executed largely to achieve cost synergies

The next wave of M&A will likely be focused on therapeutic franchise build-out and revenue augmentation rather than cost-savings



Source: Thomson Financial

Screening Criteria:

Target Business: Biotech and pharmaceutical companies defined by Thomson Financial 10

Target Geography: Global

Dates: Announcement dates between 01/01/08 – 09/30/09

Deal Size: Minimum transaction value of US\$20M

Ownership: 90% of shares outstanding owned post-transaction

Noteworthy M&A Transactions

Blockbusting Mega-Mergers

- Pfizer's acquisition of Wyeth for \$67B
- Merck's acquisition of Schering-Plough for \$38B
- Roche's acquisition of Genentech for \$47B

Rising Importance of Emerging Markets

- Sanofi-Aventis acquired Brazilian generics firm, Medley Pharmaceuticals, for \$660M
 - Sanofi-Aventis also acquired Laboratorios Kendrick in Mexico
- Novartis acquires an 85% stake in vaccine company Zhejiang Tianyuan Bio-Pharmaceuticals Co. Ltd. For \$125M
 - Novartis also to invest over \$1B to increase its R&D activities in China

Platform Deals

- Cephalon acquired Arana Therapeutics for A\$328M
 - Acquisition gave Cephalon an antibody therapeutics franchise
- Sanofi-Aventis acquired Fovea for \$130M
 - Provides Sanofi with Fovea's pipeline of ophthalmic compounds and its proprietary discovery platform, used to discover factors that play a role in protecting retinal cells from degeneration

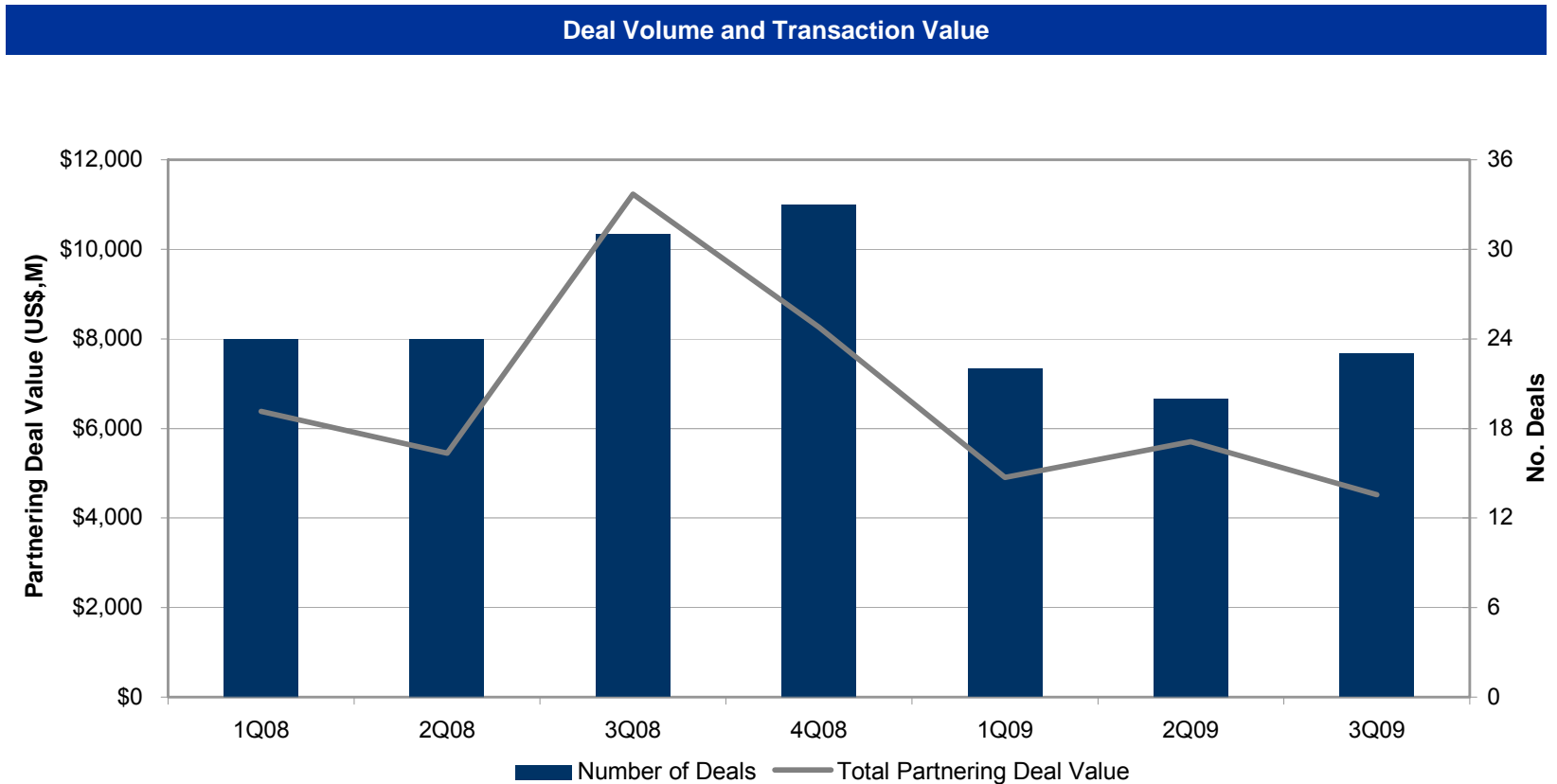
Source: Biocentury

The Partnering Landscape: January 2008 – 3Q09

In 4Q08, total transaction value fell despite the rise in deal volume; cash-strapped biotechs with no financing options succumbed to less than optimal partnering deals

Deal volume fell significantly in 1Q09 (partly because Big Pharma was distracted with mergers?)

Partnering transaction activity has increased in 3Q09 toward a level approaching early 2008



Source: Medtrack

Screening Criteria:

Date: Deals announced between 01/01/08 – 09/30/09

Deal Size: Minimum transaction value of US\$10M

Deal Type: Partnerships and alliances in the biotechnology and pharmaceuticals market

Noteworthy Partnering Deals: January 2008 – 3Q09

Unsurprisingly, late-stage deals have garnered the greatest value in terms of upfront payments and total deal values

In addition to oncology, headlining deals have been made in the CNS space

Date	Program(s)	Indication(s)	Source	Partner(s)	Phase	Upfront	Deal Size	Upfront / Deal Size
2/4/08	AMG108, AMG317, AMG386, AMG479, AMG655, AMG706, Vectibix	Inflammation, Oncology, Pain	Amgen	Takeda	Various Clinical	300	1,177	25%
9/3/08	PF1913539, PF1913539 with Donepezil hydrochloride	Alzheimer's disease, Huntington's disease	Medivation	Pfizer	III	225	725	31%
12/12/08	BMS907351, BMS907351 with Erlotinib	Cancer	Exelixis	Bristol-Myers Squibb	III	195	535	36%
1/28/08	Alvesco, Alvesco Combo, Alvesco HFA, Omnaris, Omnaris HFA	Allergy, Asthma	Nycomed	Sepracor	II	150	430	35%
7/14/08	ACT078573	Insomnia	Actelion	GlaxoSmithKline	III	148	3,308	4%
11/4/08	Chondrogen, Prochymal	Acute radiation injury, COPD, Graft versus host, Crohn's, Meniscus damage, Osteoarthritis, Myocardial infarction, Type I Diabetes	Osiris Therapeutics	Genzyme	III	130	1,380	9%
9/21/09	NKTR118, NKTR119	Bowel disorders, Pain	Nektar Therapeutics	AstraZeneca Plc	II	125	735	17%
8/28/08	D23129, Retigabine MR VALEANT, VRX698	Epilepsy	Valeant Pharmaceuticals	GlaxoSmithKline	III	125	820	15%
7/1/09	Amaya	Multiple sclerosis	Acorda Therapeutics	Biogen Idec	PA	110	510	22%
1/22/08	NXL104 with Cefaroline	Antibiotics	Novexel	Forest Laboratories	I	105	210	50%

Source: Medtrack